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EXAMINER

POPHAM, JEFFREY D

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,653

Applicant(s)

MIZELL ET AL.

Examiner

Jeffrey D. Popham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-18,20-30 and 32-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-18,20-30 and 32-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Remarks

Claims 1, 4-18, 20-30, and 32-39 are pending.

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 32 is objected to because of the following informalities: Claim 32 is dependent upon a cancelled claim. For purposes of prior art rejection, claim 32 has been construed as being dependent upon claim 24. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brothers (U.S. Patent Application Publication 2002/0083178) in view of Schneier (Schneier, Bruce, "Applied Cryptography", Second Edition, 1996, pp. 37-39).

Regarding Claim 1,

Brothers discloses a method of authenticating the originator of a packet in a network comprising:

Filtering the packet for a tag embedded therein (Paragraphs 20, 21, 22, and 25);

Reading contents of the tag including a URL of the originator and a first hash (Paragraphs 20, 21, 22, and 25);

Calculating a second hash from the URL of the originator in the tag (Paragraphs 20, 21, 22, and 25); and

Authenticating the originator of the packet upon determining the first hash and the second hash are identical (Paragraphs 20, 21, 22, and 25);

But does not disclose that the first hash is encrypted and decrypting the hash.

Schneier, however, discloses that the hash is encrypted, and decrypting the hash (Pages 37-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the signature techniques of Schneier into the resource distribution system of Brothers in order to prove and verify that the signature is authentic, unforgeable, and non-reusable, that the signed document is unalterable, and/or that the signature cannot be repudiated.

Regarding Claim 4,

Brothers as modified by Schneier discloses the method of claim 1, in addition, Brothers discloses that calculating a second hash from the URL of the originator further comprises calculating the second hash from an instance of a hashing algorithm used by the originator to generate the first hash (Paragraphs 20, 21, 22, and 25).

Regarding Claim 15,

Brothers discloses a node in a network for authenticating an originator of a packet comprising:

A processing unit (Paragraphs 20, 21, 22, and 25; and Figures 3 and 5);

A memory unit operable to store an authentication algorithm therein that is executable by the processing unit (Paragraphs 20, 21, 22, and 25; and Figures 3 and 5); and

An interface to a network operable to receive the packet, the authentication algorithm operable to filter the packet for a tag embedded therein, obtain a first hash in the embedded tag, calculate a second hash from a URL of the originator in the tag, and authenticate the originator upon a comparison between the first hash and the second hash (Paragraphs 20, 21, 22, and 25; and Figures 3 and 5).

But does not disclose that the first hash is encrypted and decrypting the hash.

Schneier, however, discloses that the hash is encrypted, and decrypting the hash (Pages 37-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the signature techniques of Schneier into the resource distribution system of Brothers in order to prove and verify that the signature is authentic, unforgeable, and non-reusable, that the signed document is unalterable, and/or that the signature cannot be repudiated.

Regarding Claim 16,

Brothers as modified by Schneier discloses the apparatus of claim 15, in addition, Brothers discloses that the instance of the hashing algorithm is executable by the processing unit, and wherein a second instance of the hashing algorithm is executable by the originator of the packet and operable to generate the encrypted hash (Paragraphs 20, 21, 22, and 25; and Figures 3 and 5).

4. Claims 5, 8, 11-14, 17, 18, 20, 23-25, 28-30, 32, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brothers in view of Schneier, further in view of Blott (EP 1,054,529 A2).

Regarding Claim 5,

Brothers as modified by Schneier does not disclose specifying a billing treatment for the packet upon authentication of the originator.

Blott, however, discloses specifying a billing treatment for the packet upon authentication of the originator (Paragraphs 36-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the network usage billing system of Blott into the resource distribution system of Brothers as modified by Schneier in order to allow the system to monitor and modify a user's quality of service so as to provide appropriate billing for such usage dependent upon the level of quality of service the user receives and/or wishes to get (Paragraph 50).

Regarding Claim 8,

Brothers as modified by Schneier and Blott discloses the method of claim 5, in addition, Blott discloses that specifying a billing treatment for the packet upon authentication of the originator further comprises interrogating a database of billing treatment directives, the database including a record containing the address of the originator and an associated record specifying the billing treatment (Paragraphs 36-39).

Regarding Claim 11,

Brothers as modified by Schneier and Blott discloses the method of claim 5, in addition, Blott discloses generating a call detail record having a traffic volume count of a data session that includes the packet (Paragraphs 36-39); and calculating a tariff for the data session based upon the contents of the call detail record (Paragraphs 36-39).

Regarding Claim 12,

Brothers as modified by Schneier and Blott discloses the method of claim 11, in addition, Blott discloses that calculating a tariff for the data session further comprises calculating the tariff and levying the tariff against the originator of the packet (Paragraphs 28 and 50).

Regarding Claim 13,

Brothers as modified by Schneier and Blott discloses the method of claim 11, in addition, Blott discloses that calculating a tariff for the data session further comprises parsing the traffic volume count from other traffic volume counts included in the call detail record, the calculated tariff calculated for the parsed traffic volume count independently of the other traffic volume counts (Paragraphs 28, 36, and 50).

Regarding Claim 14,

Brothers as modified by Schneier and Blott discloses the method of claim 11, in addition, Blott discloses that generating a call detail record having a traffic volume count further comprises generating a call detail record having the traffic volume count and the address of the originator associated therewith (Paragraph 28, and Figure 3).

Regarding Claim 17,

Brothers as modified by Schneier does not disclose an accounting algorithm executable by the processing unit and operable to generate a

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call detail record including a traffic volume count of a data session including the packet.

Blott, however, discloses an accounting algorithm executable by the processing unit and operable to generate a call detail record including a traffic volume count of a data session including the packet (Paragraphs 36-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the network usage billing system of Blott into the resource distribution system of Brothers as modified by Schneier in order to allow the system to monitor and modify a user's quality of service so as to provide appropriate billing for such usage dependent upon the level of quality of service the user receives and/or wishes to get (Paragraph 50).

Regarding Claim 18,

Brothers as modified by Schneier and Blott discloses the apparatus of claim 17, in addition, Blott discloses that the call detail record further includes the address of the originator in association with the traffic volume count (Paragraph 28; and Figure 3); and Brothers discloses that the address is a URL (Paragraphs 20, 21, 22, and 25).

Regarding Claim 20,

Brothers as modified by Schneier discloses the apparatus of claim 15, in addition, Brothers discloses that an address of the originator comprises a URL (Paragraphs 20, 21, 22, and 25); but does not disclose a

database having a record maintaining an address of the originator and an associated record having a traffic treatment specification, the node operable to condition the packet such that the network forwards the packet according to the traffic treatment specification.

Blott, however, discloses a database having a record maintaining an address of the originator and an associated record having a traffic treatment specification, the node operable to condition the packet such that the network forwards the packet according to the traffic treatment specification (Paragraphs 22 and 36-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the network usage billing system of Blott into the resource distribution system of Brothers as modified by Schneier in order to allow the system to monitor and modify a user's quality of service so as to provide appropriate billing for such usage dependent upon the level of quality of service the user receives and/or wishes to get (Paragraph 50).

Regarding Claim 23,

Brothers as modified by Schneier and Blott discloses the apparatus of claim 17, in addition, Blott discloses that the node is operable to forward the call detail record to a second node in the network operable to perform billing procedures on the contents thereof (Paragraph 50).

Regarding Claim 24,

Brothers discloses a telecommunication network operable to transmit a data packet from an originator to a terminating device within the network, the network comprising:

A first node connected to a data network and operable to receive the packet generated by the originator, the first node operable to execute an authentication algorithm operable to filter the packet for a tag embedded therein, obtain a first hash in the embedded tag, calculate a second hash from a URL of the originator in the tag, and authenticate the originator upon a comparison between the first hash and the second hash (Paragraphs 20, 21, 22, and 25); and

A terminating device (Paragraphs 20, 21, 22, and 25);

But does not disclose that the first hash is encrypted and decrypting the hash; or a second node operable to receive the packet from the first node and transmit the packet to a terminating device.

Schneier, however, discloses that the hash is encrypted, and decrypting the hash (Pages 37-39). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the signature techniques of Schneier into the resource distribution system of Brothers in order to prove and verify that the signature is authentic, unforgeable, and non-reusable, that the signed document is unalterable, and/or that the signature cannot be repudiated.

Blott, however, discloses a second node operable to receive the packet from the first node and transmit the packet to a terminating device (Paragraph 48). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the network usage billing system of Blott into the resource distribution system of Brothers as modified by Schneier in order to allow the system to monitor and modify a user's quality of service so as to provide appropriate billing for such usage dependent upon the level of quality of service the user receives and/or wishes to get (Paragraph 50).

Regarding Claim 25,

Brothers as modified by Schneier and Blott discloses the system of claim 24, in addition, Brothers discloses that the terminating device is a mobile terminal (Paragraphs 94 and 103).

Regarding Claim 28,

Brothers as modified by Schneier and Blott discloses the system of claim 24, in addition, Brothers discloses that the originator is operable to execute a first instance of a hashing algorithm that generates the first hash, the first node further comprising a second instance of the hashing algorithm operable to calculate the hash from the address of the originator in the tag (Paragraphs 20, 21, 22, and 25).

Regarding Claim 29,

Brothers as modified by Schneier and Blott discloses the system of claim 24, in addition, Blott discloses an accounting algorithm operable to generate a call detail record including a traffic volume count of a data session including the packet (Paragraphs 36-39).

Regarding Claim 30,

Brothers as modified by Schneier and Blott discloses the system of claim 29, in addition, Brothers discloses an address that is a URL (Paragraphs 20, 21, 22, and 25); and Blott discloses that the call detail record further including the address of the originator in association with the traffic volume count (Paragraphs 36-39).

Regarding Claim 32,

Brothers as modified by Schneier and Blott discloses the system of claim 24, in addition, Brothers discloses that an address of the originator comprises a URL (Paragraphs 20, 21, 22, and 25); and Blott discloses a database having a record maintaining an address of the originator and an associated record having a traffic treatment specification, the first node operable to condition the packet such that the network forwards the packet according to the traffic treatment specification (Paragraphs 22 and 36-39).

Regarding Claim 36,

Brothers as modified by Schneier and Blott discloses the system of claim 24, in addition, Brothers discloses an address that is a URL (Paragraphs 20, 21, 22, and 25); and Blott discloses a billing node

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operable to perform billing procedures on a call detail record, the billing node including an interface with the first node and operable to receive a call detail record thereon, the billing node operable to execute a billing algorithm operable to generate a tariff dependent on contents of a traffic volume container included in the call detail record, the call detail record having the address of the originator associated therewith, the tariff further dependent on the address of the originator (Paragraphs 28 and 50; and Figure 3).

Regarding Claim 37,

Brothers as modified by Schneier and Blott discloses the system of claim 36, in addition, Blott discloses that the tariff is levied against the originator (Paragraphs 28 and 50).

Regarding Claim 38,

Brothers as modified by Schneier and Blott discloses the system of claim 36, in addition, Blott discloses that the tariff is levied against the terminating device (paragraphs 34, 37, and 50).

Regarding Claim 39,

Brothers as modified by Schneier and Blott discloses the system of claim 36, in addition, Brothers discloses that an address comprises a URL (Paragraphs 20, 21, 22, and 25); and Blott discloses that the call detail record includes other traffic volume containers, the tariff dependent on the

address of the originator being independent of the other traffic volume containers (Paragraphs 28, 36, and 50).

5. Claims 6, 7, 9, 10, 21, 22, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brothers in view of Schneier and Blott, further in view of Nichols (Nichols et al., "Definition of Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers), The Internet Society, 1998, pp. 1-20).

Regarding Claim 6,

Brothers as modified by Schneier and Blott does not disclose writing a differentiated services codepoint into the packet upon authentication of the originator.

Nichols, however, discloses writing a differentiated services codepoint into the packet upon authentication of the originator (Pages 7-9, Section 3). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the differentiated services field of Nichols into the resource distribution system of Brothers as modified by Schneier and Blott in order to enable scalable service discrimination in the Internet without the need for per-flow state and signaling at every hop.

Regarding Claim 7,

Brothers as modified by Schneier, Blott, and Nichols discloses the method of claim 6, in addition, Nichols discloses that writing a

differentiated services codepoint into the packet further comprises writing a differentiated services codepoint into at least one of a traffic class octet of an IPv6 packet and a type-of-service field of an IPv4 packet (Pages 7-9, Section 3).

Regarding Claim 9,

Brothers as modified by Schneier and Blott does not disclose that the associated record contains a differentiated service code point.

Nichols, however, discloses that the associated record contains a differentiated service code point (Pages 7-9, Section 3). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the differentiated services field of Nichols into the resource distribution system of Brothers as modified by Schneier and Blott in order to enable scalable service discrimination in the Internet without the need for per-flow state and signaling at every hop.

Regarding Claim 10,

Brothers as modified by Schneier, Blott, and Nichols discloses the method of claim 9, in addition, Blott discloses that interrogating the database further comprises supplying the database with the address of the originator read from the tag contents (Paragraphs 36-39), and Nichols discloses reading the differentiated service code point from the associated record (Pages 7-9, Section 3).

Regarding Claim 21,

Brothers as modified by Schneier and Blott does not disclose a differentiated services codepoint.

Nichols, however, discloses that the traffic treatment specification is a differentiated services codepoint (Pages 7-9, Section 3). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the differentiated services field of Nichols into the resource distribution system of Brothers as modified by Schneier and Blott in order to enable scalable service discrimination in the Internet without the need for per-flow state and signaling at every hop.

Regarding Claim 22,

Brothers as modified by Schneier, Blott, and Nichols discloses the apparatus of claim 21, in addition, Nichols discloses that the node is operable to write the differentiated services codepoint into at least one of a traffic class octet of an IPv6 packet and a type-of-service field of an IPv4 packet (Pages 7-9, Section 3).

Regarding Claim 33,

Brothers as modified by Schneier and Blott does not disclose a differentiated services codepoint.

Nichols, however, discloses that the traffic treatment specification is a differentiated services codepoint (Pages 7-9, Section 3). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the differentiated services field of Nichols into the

resource distribution system of Brothers as modified by Schneier and Blott in order to enable scalable service discrimination in the Internet without the need for per-flow state and signaling at every hop.

Regarding Claim 34,

Brothers as modified by Schneier and Blott discloses the system of claim 33, in addition, Nichols discloses that the first node is operable to write the differentiated services codepoint into at least one of a traffic class octet of an IPv6 packet and a type-of-service field of an IPv4 packet (Pages 7-9, Section 3).

Regarding Claim 35,

Brothers as modified by Schneier and Blott discloses the system of claim 34, in addition, Blott discloses that the first node and the second node are operable to provide forwarding treatments of the packet across the network according to service specifications (Paragraphs 36-39); and Nichols discloses that the service specifications are associated with the differentiated services codepoint (Pages 7-9, Section 3).

6. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brothers in view of Schneier and Blott, further in view of Uskela (WO 01/471179).

Regarding Claim 26,

Brothers as modified by Schneier and Blott does not disclose that the network is a mobile telecommunication system and the second node is

a switching system, the network further comprising: a base station subsystem; and a base transceiver station managed by the base station subsystem, the terminating device in communication with the base transceiver station.

Uskela, however, discloses that the network is a mobile telecommunication system and the second node is a switching system, the network further comprising: a base station subsystem (Page 5, line 28 to Page 6, line 10); and a base transceiver station managed by the base station subsystem, the terminating device in communication with the base transceiver station (Page 5, line 28 to Column 6, line 10; and Figure 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the wireless communication system of Uskela into the resource distribution system of Brothers as modified by Schneier and Blott in order to prevent spoofing so that one party cannot act as though it is another party, and so that the system can be implemented in a wireless telephone environment, thus expanding the system's use.

Regarding Claim 27,

Brothers as modified by Schneier, Blott, and Uskela discloses that the first node is a gateway general packet radio services support node (Page 6, lines 11-30).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Royer (U.S. Patent Application Publication 2002/0095567), Payne (U.S. Patent 5,715,314), and Mittal (U.S. Patent 6,952,770).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jeffrey D Popham
Examiner
Art Unit 2137


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